Patent claims

1. A steam power plant (1), comprising at least one steam turbine (3) and a steam generator (5), characterized in that a firing device (7) is arranged downstream of the steam generator (5) and upstream of the steam turbine (3) and/or downstream of a first turbine stage (11) and upstream of a second turbine stage (13) of the steam turbine (3), as seen in the direction (9) of the flow of steam (17), and the flow of steam (17) can be heated in a combustion chamber (19) of the firing device (7) by being mixed with a hot gas that can be generated in the combustion chamber (19).

2. The steam power plant (1) as claimed in claim 1, characterized in that hydrogen and/or a hydrocarbon, in particular methane, can be fed to the firing device (7) as fuel (33).

3. The steam power plant (1) as claimed in claim 1 or 2, characterized in that an oxygen-containing gas, in particular pure oxygen (31) and/or air, can be fed to the firing device (7) in order to generate a combustion atmosphere in the combustion chamber (19).

4. The steam power plant (1) as claimed in one of claims 1 to 3, characterized in that combustion products (39) which are produced can be removed from the flow of steam (9) by means of a condenser (25) connected downstream of the steam turbine (3).